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Mark G. Bocchetti
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER	
KRASNIC, BERNARD	
ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/792,079	GALLAGHER ET AL.	
	Examiner	Art Unit	
	BERNARD KRASNIC	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,20-28,34 and 35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,20-28,34 and 35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The amendment filed 2/12/2009 have been entered and made of record.

2. The application has pending claim(s) 1-13, 20-28, 34 and 35.

3. In response to the amendments filed on 2/12/2009:

The "Objections to the drawings" have been entered and therefore the Examiner withdraws the objections to the drawings.

The "Objections to the claims" have been entered, but the Applicant has not amended a few of the addressed claim objections and therefore the Examiner has once again addressed these issues.

The "Claim rejections under 35 U.S.C. 112, second paragraph" have been entered, but the Applicant has not amended a few of the addressed 35 U.S.C. 112, second paragraph issues and therefore the Examiner has once again addressed these issues.

The "Claim rejections under 35 U.S.C. 101" have been entered and therefore the Examiner withdraws the rejections under 35 U.S.C. 101.

4. Applicant's arguments filed 2/12/2009 have been fully considered but they are not persuasive.

The Applicant alleges, "Applicant notes that Schildkraut et al is directed to finding ..." in page 7 through "Applicant notes that the Examiner has the burden of establishing a prima facie case ..." in page 8, and states respectively that while Schildkraut discusses the relationship between separation distance and pupil size, Schildkraut never discloses or suggests utilizing the separation distance as a parameter to adjust the size of detected defects and that the combination of Held and Schildkraut would not lead one of ordinary skill in the art to adjust the size of the defects based on separation distance as claimed. *Firstly, although the Examiner agrees* that Schildkraut alone does not suggest utilizing the separation distance as a parameter to adjust the size of detected defects, *the Examiner disagrees* that Held and Schildkraut in combination don't suggest such a teaching. *Secondly*, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning [the Applicant states "applicant believes only applicant's own disclosure provides the bridge between the references and the claimed invention" in page 8], it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, Held is used to disclose that *an image has at least one redeye defect* (see Held, [0095]-[0096], the strongest defect located in the eye is detected) and *adjusting a size of said defect to provide adjusted defects* (see Held, [0024]-[0025] and

[0066], the eye diameter distance measurement helps identify the borderlines of the red eye defects, [0094]-[0096], [0098] at lines 1-3, [0099] at lines 6-8 and 11-13, the strongest defect's size is adjusted by growing the defect region into a seed region which shouldn't exceed a certain size limit to avoid bleeding of the grown region into adjacent skin regions) and *changing a color of said adjusted defects* (see Held, Fig. 6, [0027], after growing the seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed region defects). Schildkraut is used to disclose an image *having at least one redeye defect pair* (see Schildkraut, col. 13 at lines 39-44, col. 14 at lines 33-48, single redeye defects may be found but because redeye defects normally occur in pairs, a process to determine two candidate redeye defects corresponding to a redeye defect pair [left and right candidate redeye defects] is calculated) and *measuring a defect pair separation* (see Schildkraut, col. 14, lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter [the pupil size limit of said defects of said defect pair is set responsive to said defect pair separation distance calculation]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have realized that when Held adjusts the strongest defect's size by growing the defect region and bounding the growth not to exceed a certain size limit to avoid bleeding of the grown region into adjacent skin regions, to use Schildkrauts pupil size limit [which is determined based on the distance calculation between the left and right candidate redeye defects] as Held's certain size limit in order to avoid bleeding of the grown region into adjacent skin regions [e.g. avoid bleeding of the grown region

into the sclera {white outer area of the eye}]. Therefore the present claims are still not in condition for allowance because they are still not patentably distinguishable over the prior art references.

The Applicant alleges, "The remaining dependent claims ..." in page 8, and states respectively that none of the secondary references overcomes the deficiencies of the primary references discussed above and accordingly the remaining dependent claims are believed to be in condition for allowance for the same reasons set forth above with respect to the independent claims. The Examiner disagrees because as discussed above, the primary references Held and Schildkraut in combination do indeed teach the independent claims and therefore the dependent claims are still not in condition for allowance for the same reasons set forth above with respect to the Examiner's arguments in regards to the independent claims. Therefore the present claims are still not in condition for allowance because they are still not patentably distinguishable over the prior art references.

Claim Objections

5. Claim 25 is objected to because of the following informalities:

Claim 25, lines 4-5: "the respective" should be -- a respective --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claim 25, line 1 respectively: The limitation "said seed pixels" lacks clear antecedent basis. The Examiner believes it should be -- said seed defects -- and it has been treated as such.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-7, 11-13, 20-28, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Held et al (US 2002/0126893 A1, as applied in previous Office Action) in view of Schildkraut et al (US 6,252,976 B1, provided by the Applicant's Information Disclosure Statement – IDS, as applied in previous Office Action).

Re Claim 1: Held discloses a method for correcting redeye in a digital image / automatically correcting color defective redeye area's in an image (see abstract at lines 1-2, the image is digital because pixels are being analyzed and pixels are correspondent to digital images, [0027]), said image having at least one redeye defect / strongest defect located in the eye which is detected (see [0095]-[0096]); said method comprising the steps of adjusting a size / growing by adding and omitting of said defect / strongest defect responsive to said defect to provide adjusted defect / grown seed region defects (see [0024]-[0025] and [0066], the eye diameter distance measurement helps identify the borderlines of the red eye defects, [0094]-[0096], [0098] at lines 1-3, [0099] at lines 6-8 and 11-13, the strongest defect's size is adjusted by growing the defect region into a seed region which shouldn't exceed a certain size limit to avoid bleeding of the grown region); and changing a color / correcting redeye color of said adjusted defect / grown seed region defects (see Fig. 6, [0027], after growing the seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed region defects).

However Held doesn't explicitly suggest that the redeye defect is a redeye defect pair and that the separation of the defect pair is measured and used to adjust the defects.

Schildkraut discloses having at least one redeye defect pair (see Schildkraut, col. 13 at lines 39-44, col. 14 at lines 33-48, single redeye defects may be found but because redeye defects normally occur in pairs, a process to determine two candidate redeye defects corresponding to a redeye defect pair [left and right candidate redeye

defects] is calculated), measuring a defect pair separation (see col. 14, lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter); setting the pupil size limit of said defects of said defect pair responsive to said defect pair separation (see col. 14, lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter).

Therefore, it would have been obvious to one or ordinary skill in the art at the time the invention was made to modify Held's method using Schildkraut's teachings by including to Held's defect redeye its corresponding opposite redeye to create a defect pair and by including the additional pupil size limit parameter [calculated from Schildkraut's defect pair separation measurement] to Held's size parameter [Held's size parameter is used as a limit to the defect growing] in order to further enhance the detection of redeye defects without human intervention (see Schildkraut, col. 13 at lines 45-51) (In other words, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have realized that when Held adjusts the strongest defect's size by growing the defect region and bounding the growth not to exceed a certain size limit to avoid bleeding of the grown region into adjacent skin regions, to use Schildkrauts pupil size limit [which is determined based on the distance calculation between the left and right candidate redeye defects] as Held's certain size limit in order to avoid bleeding of the grown region into adjacent skin regions [e.g. avoid bleeding of the grown region into the sclera {white outer area of the eye}].).

Re Claim 2: Held further discloses reducing the size of at least one of said defects / strongest defect of said defect pair (see Held, [0094] at lines 8-10, [0099] at lines 6-8 and 10-12, the strongest defect is grown and bounded not to exceed a certain size in order to avoid bleeding of the grown region by *omitting* pixels that should not be including in the seed region defects).

Re Claim 3: Schildkraut discloses calculating a size limit using said defect pair separation (see Schildkraut, col. 14, lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter) and trimming pixels beyond said size limit from said defects (see Held, [0094] at lines 8-10, [0099] at lines 6-8 and 10-12, the strongest defect is grown and bounded not to exceed a certain size [Schildkraut's size parameter was included to Held's size parameter in independent claim 1, see discussion's above] in order to avoid bleeding of the grown region by *omitting* pixels that should not be including in the seed region defects).

Re Claim 4: Schildkraut discloses detecting locations of a pair of seed defects prior to said measuring (see col. 14, lines 33-48, distance between the identified left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter). Held discloses growing said seed defects into grown defects prior to said adjusting (see Fig. 6, [0027], after growing the seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed

region defects); and wherein said adjusting further comprises reducing the size of said grown defects (see Held, [0094] at lines 8-10, [0099] at lines 6-8 and 10-12, the strongest defect is grown and bounded not to exceed a certain size in order to avoid bleeding of the grown region by *omitting* pixels that should not be including in the seed region defects).

Re Claim 5: Held in view of Schildkraut further discloses wherein said measuring is prior to said growing (as discussed in the claim 1, Schildkraut's teaching's of a size parameter was included to Held's size parameter in order to set the bounds of the region growing procedure and therefore the size bounds measurement is needed to be calculated prior to region growing or prior to adjusting the size).

Re Claim 6: Held in view of Schildkraut further discloses wherein said seed defects / Held's strongest defect each have a single pixel / center prior to said growing / region growing (as discussed above in claim 1, Schildkraut's teaching's include to Held's defect redeye its corresponding opposite redeye to create a defect pair and Held discloses the strongest defect is used as the center [single pixel] for further extension by growing [see Held, [0096] at lines 1-4]).

As to claim 7, the discussions are addressed with regard to claim 3.

Re Claim 11: Schildkraut further discloses ascertaining a head rotation / tilt of each said defect pair (see Schildkraut, Figs. 17A-17B and 18).

Re Claim 12: Held further discloses wherein said size limit / border size is based upon an imaging system blur / correction mask filtering associated with said image (see Held, [0024], [0027], the border size limit and correction mask cover the same defective area).

Re Claim 13: Held in view of Schildkraut further discloses determining a spatial operator / correction mask in accordance with said defect pair separation [Schildkraut modified Held's redeye defect to be a pair of redeye defects using defect pair separation criteria]; and using said spatial operator to blend / correction mask filtering the image in a vicinity of said adjusted defects / grown defect regions (see Held, [0024], [0027], after the redeye defects are grown with respect to each defect to seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed region defects).

As to claim 20, the claim is the corresponding method claim to claims 1 and 4. The discussions are addressed with regard to claims 1 and 4. Further, Held grows each of said seed defects / strongest defect using Held's border edge limit which is used to restrict the region growing procedure to avoid bleeding of the grown region (see Held, [0094]-[0096]). Schildkraut's teachings of the measurement separation of the members (see Schildkraut, col. 14 at lines 33-48, distance between the left and right candidate

redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter) further specify's Held's size region limit which in turn is then used to adjust Held's grown region by omitting pixels (see Held, [0099] at lines 6-8 and 10-12).

As to claim 21, the discussions are addressed with respect to claim 4.

As to claim 22, the discussions are addressed with respect to claim 6.

As to claim 23, the discussions are addressed with respect to claim 3.

As to claim 24, the discussions are addressed with respect to claims 22-23.

As to claim 25 [as best understood by the Examiner], the discussions are addressed with respect to claims 22-23. Although Held as modified by Schildkraut doesn't explicitly suggest that each seed defect has multiple contiguous pixels, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Held's seed defect / strongest defect consist of multiple contiguous pixels instead of a single pixel because such a strongest defect estimation could have several contiguous pixels relative to the peak (see Held, Fig. 7, new strongest defect estimate may have the peak overlapping several contiguous pixels).

Re Claim 26: Held further discloses generating a list of pixels of each said seed defect to provide list pixels (see Held, [0094]-[0098]); determining pixels neighboring said list pixels to provide neighboring pixels (see Held, [0094]-[0098]); calculating color value ratios (see Held, Equation 1.2) of each of said neighboring pixels (see Held, [0094]-

[0098]); and adding to said list one of said neighboring pixels having the color value ratio most distant from a predetermined limit, when one or more of said neighboring pixels has a color value ratio greater than a predetermined limit (see Held, [0094]-[0098]).

Re Claim 27: Held as modified by Schildkraut further discloses determining an eye separation correction factor (see Schildkraut, col. 14 at lines 33-48, the separation distance is multiplied by .083 to measure the distance in pixels relatively to produce this pupil size limit) and wherein said adjusting is responsive to said defect pair separation and said separation correction factor (see Schildkraut, col. 14 at lines 33-48, the separation distance is multiplied by a factor of .083 to measure the relative distance of pupil size limit in pixels [Schildkraut's size limit is further specifying Held's size limit parameter to improve Held's growing and trimming / omitting defect regions]).

Re Claim 28: Schildkraut further discloses at least one of an age classification and a head rotation / tilt of each said defect pair (see Schildkraut, Figs. 17A-17B and 18).

As to claim 34, the claim is the corresponding computer readable medium claim to claim 1 respectively. The discussions are addressed with respect to claim 1. Schildkraut further discloses the measuring is in response to distance data by a distance measurer (see Schildkraut, col. 14, lines 33-48, distance between the left and

right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter).

As to claim 35, the claim is the corresponding system claim to claims 1 and 4 respectively. The discussions are addressed with respect to claim 1 and 4.

The claim limitations "a distance measurer means for measuring" in line 3, "a defect grower means for receiving" in line 4, and "a color modifier means for changing" in line 7, invokes 35 U.S.C. 112 6th paragraph.

10. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Held as modified by Schildkraut, and further in view of Lobo et al (US 5,781,650, provided by the Applicant's Information Disclosure Statement – IDS, as applied in previous Office Action). The teachings of Held as modified by Schildkraut have been discussed above. Re Claim 8: However Held as modified by Schildkraut fails to explicitly suggest ascertaining an age classification of each said defect pair.

Lobo discloses ascertaining an age classification of each said defect pair (see Lobo, abstract at lines 4-5, Fig. 12a, col. 14 at line 36 through col. 15 at line 12, age classification is determined using distance measured by the difference between the right and left eye [this difference is similar to Schildkraut's redeye defect pair separation measurement]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Held's method, as modified by Schildkraut, using Lobo's teachings by including the age classifier to determine the age of the identified eye pair using the difference between the left and right eye [this difference is similar to Schildkraut's redeye defect pair separation measurement] in order to be able to perform automated security surveillance (see Lobo, abstract at lines 22-23).

As to claim 9, the discussions are addressed with regard to claim 11.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Held as modified by Schildkraut and Lobo, and further in view of Prilutsky et al (US 2005/0031224 A1, as applied in previous Office Action). The teachings of Held as modified by Schildkraut and Lobo have been discussed above.
Re Claim 10: Held as modified by Schildkraut and Lobo further disclose wherein said size limit is based upon said head rotation of each said defect pair (see Schildkraut, Figs. 17A-17B and 18) and upon an imaging system blur associated with said image (see Held, [0024], [0027], the border size limit and correction mask cover the same defective area). Lobo discloses ascertaining an age classification of each said defect pair (see Lobo, abstract at lines 4-5, Fig. 12a, col. 14 at line 36 through col. 15 at line 12, age classification is determined using distance measured by the difference between

the right and left eye [this difference is similar to Schildkraut's redeye defect pair separation measurement]).

However Held as modified by Schildkraut and Lobo fails to explicitly suggest that the size limit is based upon the age classification.

Prilutsky discloses different age groups have different relative eye sizes (see Prilutsky, [0081]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Held's method, as modified by Schildkraut and Lobo, using Prilutsky's teachings by including to Lobo's teachings that the age classification of an individual indicates the eye size boundary limit in order to efficiently identify eye's in redeye applications (see Prilutsky, [0081]).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624
Bernard Krasnic
April 29, 2009